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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,119

06/17/2005

Hidehiro Nakamura

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20457 7590 03/05/2007  
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EXAMINER

PATEL, ISHWARBHAI B

ART UNIT

PAPER NUMBER

2841

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/500,119

Applicant(s)

NAKAMURA ET AL.

Examiner

Ishwar (I. B.) Patel

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 13, 14, 19, 20, 23, 27, 28, 33-35 and 37 is/are pending in the application.
- 4a) Of the above claim(s) 14, 19, 20, 23, 27, 28, 33-35, 37 and 313 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/25/17.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of group I, specie II, claims 1-5 in the reply filed on January 17, 2007 is acknowledged.

### ***Claim Objections***

2. Claim 5 is objected to because of the following: Regarding claim 5, the recitation "one of the insulating resin compositions placed at front and rear outermost layers of the connection board is or both of them are mainly made of thermoplastic resin" is confusing. The base claim 1 recites an insulating resin composition layer formed of one layer or two layer or more layers. If it is made of one layer, the structure of front and rear outermost layers as recited in claim 5 is not clear.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki (US Patent No. 6,518,514).

**Regarding claim 1**, Suzuki in figure 2 and 3A-3E, discloses a connection board comprising an insulating resin composition layer (208) formed of one layer or two or more layers (see figure) and a connection conductor (209) which is formed so as to pass through the insulating resin composition layer in its thickness direction at least at a position where a conductor circuit is connected.

**Regarding claim 2**, Suzuki further discloses a conductor circuit (circuit formed on the insulating layer, see figure 3C and 3E), which is electrically connected to the connection conductor for at least one surface of the connection board.

**Regarding claim 3**, Suzuki further discloses the conductor circuit is a metallic layer (copper foil, column 8, line 37).

**Regarding claim 4**, Suzuki further discloses an exposed portion of the connection conductor is covered with metal (see figure 3C, 3E).

**Regarding claim 5**, Suzuki further discloses one of the insulating resin compositions placed at front and rear outermost layers of the connection board is or both of them are mainly made of thermoplastic resin (the organic resin layers are made of thermoplastic resin, column 6, line 21-23).

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Parker (US Patent No. 6,303,881) in figure 1 and 2 discloses a connector with connection conductor (18) pass through insulating resin composition with connection conductor covered with metal (30).

Andou (US Patent No. 6,197,407) in figure 1 discloses a connector with connection conductor (105) pass through insulating resin composition (102) with connection conductor covered with metal (107).

Nishii (US Patent No. 6,518,515) in figure 1F discloses a connector with connection conductor (17) pass through insulating resin composition (11) with connection conductor covered with metal (18).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ishwar (I. B.) Patel whose telephone number is (571) 272 1933. The examiner can normally be reached on M-F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272 1984. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ibp  
February 28, 2007

  
Ishwar (I. B.) Patel  
Primary Examiner